

## Quarterly Progress Report

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|--|---|--|--|
| <b>Project Title:</b>  | <b>Computer Modeling and Simulation of New Jersey Signalized Highways</b> |  |  |
| <b>RFP Number:</b> 2001-01   | <b>NJDOT Research Project Manager:</b><br>Karl Brodtman, NJDOT            |  |  |
| <b>Task Order Number/Study Number:</b><br>32                           | <b>Pincipal Investigator:</b><br>Chien, Steven I-Jy                       |  |  |
| <b>Period Starting:</b> 1/1/02 - 12/31/03<br>(Start-End Date of Study) | <b>Period Ending:</b> 04/04/2003  |  |  |

| <b>Task</b>   | <b>% of Total</b> | <b>% of Task<br/>this quarter</b> | <b>% of Task<br/>to date</b> | <b>% of Total<br/>Complete</b> |
|---|-------------------|-----------------------------------|------------------------------|--------------------------------|
| Review of Literature and Current Practice                                     | 4                 | 5                                 | 100                          | 3.8                            |
| Prototype Development   | 10                | 0                                 | 95                           | 9.5                            |
| Site Identification and Data Collection Needs                                 | 10                | 0                                 | 100                          | 10                             |
| Data Collection   | 15                | 0                                 | 100                          | 15                             |
| Network Modeling with SYNCHRO and CORSIM                                      | 15                | 5                                 | 65                           | 9.75                           |
| Optimization of Signal Timing Plan with<br>SYNCHRO and CORSIM                 | 20                | 20                                | 50                           | 10                             |
| Generation of Traffic Signal Directives                                       | 10                | 0                                 | 0                            | 0                              |
| Development of Tutorial for the NJDOT Engineers<br>in the SYNCHRO Environment | 8                 | 0                                 | 0                            | 0                              |
| Final Report with Documentation of SYNCHRO<br>Models                          | 8                 | 0                                 | 20                           | 1.6                            |
| Final Report  |                   |                                   |                              |                                |
| <b>TOTAL</b>  | <b>100 %</b>      |                                   |                              | <b>59.7 %</b>                  |

### 1. Progress this quarter by task:

1. Louis Berger Associates provided traffic volume for Route 42/322. A full package of data including manual turning movements counts and intersection sketches were provided. 2. Traffic volume data for the Route 23 Corridor was entered into Synchro computer software. NJDOT was provided with a copy of the output results to verify the accuracy of the traffic signal timing data. NJDOT has been provided with a CD of the Route 23 network output. The simulation will be field verified by NJDOT.

### 2. Proposed activities for next quarter by task:

1. Verify results from SYNCHRO output for Route 23. Optimize the Route 23 network and develop revised timing plans. Include recommendations for traffic signal timing and phasing enhancements. 2. Commence data input for the Route 42/322 corridor.

### 3. List of deliverables provided in this quarter by task (product date):

Draft Literature Review  
SYNCHRO 5.0 Networks for various time periods

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### 4. Progress on implementation and training activities:

none yet

### 5. Problems/proposed solutions:

none yet

### 6. Budget summary:

|   |        |              |
|---|--------|--------------|
| Total Project Budget (# Years)                        | 2 Year | \$149,585.00 |
| Total Project Expenditure to date                     |        | \$82,300.00  |
| % of Total Project Budget Expended                    |        | 55.02%       |
|   |        |              |
| Task Order Number/ Study Number                       | 1 Year | 32           |
| Current Task Order Budget (# of Years)                |        | \$149,585.00 |
| Actual Expenditure to Date Against Current Task Order |        | \$82,300.00  |
| % of Current Task Order Budget Expended               |        | 55.02%       |